



PERFORMANCE PLASTICS PRESS RELEASE

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RadiciGroup's new special polyamides for extrusion technology

PA 6.10, PA 6.12, copolymers 6.10/6.6: special and innovative polymers for a customer-oriented market approach

The **new special polyamides for the extrusion market** are the next frontier for RadiciGroup Performance Plastics, with over 35 years of activity manufacturing technopolymers with varying formulations, from traditional to highly innovative products.

Today the **Radilon® product range**, as well as technopolymers that offer improved resistance to **high temperatures** (Radilon® A HHR and Radilon® XTreme) and reinforced materials for **metal replacement** (Radilon® A RW and Radilon® S URV high fluidity), includes **long-chain polyamides**: Radilon® D based on PA 6.10 from partially renewable sources, Radilon® DT based on PA 6.12 and RADILON CD that are copolymers PA 6.10/6.6 also being partially bio-based. These are polyamides with specific chemical-physical characteristics, whose properties can be adapted to suit the needs of the end customer. An innovative approach that RadiciGroup Performance Plastics is able to provide, thanks to its synergies with the Group's other business areas - in particular with the **Specialty Chemicals Area** - with the aim of meeting the increasingly stringent market requirements, in terms of performance and flexibility.

So what are these special products main applications in the extrusion sector? **PA 6.12** is used in the personal care industry (e.g. filaments used for toothbrushes or mascara applicators) thanks to its bend recovery characteristics, flexibility and chemical resistance. When properly formulated with compounding technology, this polyamide can also be used in pipe manufacturing (e.g. petrol ducts, oil & gas and air pipes) where, in addition to the chemical and mechanical resistance, the final product transparency is valued in respect to those manufactured with traditional polyamides (PA 6 e PA 66).

PA 6.10 is usually used for the production of monofilaments for industrial applications, for example, in Paper Machine Clothing (PMC), thanks to its unique chemical resistance and (bend recovery

characteristic which increase its durability; alternatively, it can be used for manufacturing pipes suitable for transporting petrol in fuel lines, mainly for its inherent burst strength.

Copolymers 6.10/6.6 are ideally suited for manufacturing packaging, films and wraps, also for the food industry where transparency, thermoformability and water vapour barrier properties are required. Thanks to the technologies provided by RadiciGroup Performance Plastics, a metal detectable material has been formulated using this polymer, which is used to manufacture brushes for cleaning devices in the food industry. The specific formulation allows for the detection of plastic residues, after cleaning objects that are intended to come into contact with food. This is a feature of utmost importance in terms of health and safety and that once again, shows how RadiciGroup is an innovative supplier who is able to meet the most demanding needs of its customers.

*«By introducing this new range – said **Enrico Simonato, RadiciGroup Performance Plastics Extrusion Market Manager** – we aim at implementing a diversification process in the market, that is possible thanks to the vertical integration of our Group. The Novara chemical plant is our “internal” trusted partner for developing products in line with the different expectations of our customers».*

Until now, most of the extrusion product demand has been met by polyamides 11 and 12, which ensure a good chemical resistance, a low level of rigidity, translucency and low moisture absorption but are quite costly. RadiciGroup’s response is to offer an alternative, a range of LCPA-based materials with an excellent cost/performance ratio while maintaining good properties in terms of chemical resistance, low moisture absorption, good mechanical properties and better thermal properties (higher melting point). The latter feature is crucial when the final products need to be used under hot conditions or in contact with hot parts.

RADICIGROUP - - With approximately 3,000 employees, a sales revenue of EUR 1,011 million in 2015, and a network of production and sales sites located throughout Europe, North America, South America and Asia, RadiciGroup is one of the world's leading producers of a wide range of chemical intermediates, polyamide polymers, engineering plastics, synthetic fibres and nonwovens. These products are the result of the Group's outstanding chemical know-how and vertical integration in the polyamide production chain, developed to be used in a variety of industrial sectors such as: AUTOMOTIVE – ELECTRICAL AND ELECTRONICS – CONSUMER GOODS – APPAREL – FURNISHINGS – CONSTRUCTION – HOUSEHOLD APPLIANCES – SPORT. The basis of the Group's strategy is a strong focus on innovation, quality, customer satisfaction and social and environmental sustainability. With its business areas - **Specialty Chemicals, Performance Plastics and Synthetic Fibres & Nonwovens** (Performance Yarn, Comfort Fibres and Extrusion Yarn), RadiciGroup is part of a larger industrial group that also includes textile machinery (ITEMA), energy (GEOGREEN) and hotel businesses (SAN MARCO).
